

### Remarks

This amendment is responsive to the official action mailed September 20, 2007, and is accompanied by an extension under 37 C.F.R. §1.136(a) and the required official fee.

In the official action, objection was made to claims 6-9 as being improper multiple dependent claims, and as a result, claims 5-9 were not examined. It appears that the first official action has overlooked the preliminary amendment filed on February 25, 2005 (concurrently with entry into the US national phase), wherein the dependencies of these claims were corrected for US format. The preliminary amendment appears in the official record as seen from the image file wrapper found in PAIR. Claims 4-9 are not multiple dependent claims.

Inasmuch as some of the claims pending in the application have not been examined as submitted in the preliminary amendment (which was not limited only to correction of improper multiple dependencies), Applicants request reconsideration including examination of remaining claims 5-9. The next official action may be a formal allowance, as requested herein, but if not, Applicants request that any further official action be nonfinal. Finally, Applicants request that the file of the application be reviewed to ensure that Applicants were not assessed official fees with respect to the presentation of multiple dependent claims or presentation of claims in excess of the number permitted under the basic filing fee, either of which would be erroneous.

In the official action, claims 1, 3-5 and 10-12 were rejected under 35 U.S.C. §103 over a combination of US 7024,203 – Naghian and NPL Doc. 0-7803-3777-8/97, 1997 IEEE – Olofsson et al. Claims 1 and 2 have been combined in this amendment as amended claim 1; and claims 10 and 11 are combined as amended claim 10. Therefore, the rejection of claims 1, 3-5 and 10-12 on these grounds has been obviated. Withdrawal of the rejection is requested.

Former claims 2 and 11 (now equivalent to amended independent claims 1 and 10) were rejected under 35 U.S.C. §103 over a combination of Naghian, Olofsson and

US 6,625,155 – Dziong. Reconsideration is requested. The cited references fail to render obvious the invention defined in the amended claims. The proposed combination does not meet all the elements claimed. There is no reasonable basis to conclude that a person of ordinary skill might expect that combining the references and modifying them in the manner claimed would be possible, or predictably likely to produce some beneficial result.

As admitted in the official action, neither Naghian nor Olofsson discloses the use of Kalman prediction. The examiner points out that Dziong discloses a Kalman filter, which is true, but there is no teaching or suggestion of applying Kalman techniques to determining an interference vector using the mean and standard deviation of the received signal to interference ratio.

The Dziong disclosure relates to a fixed broadband asynchronous transfer mode ("ATM") network and a load estimation technique is used to measure or estimate the traffic loading on discrete connections, i.e., one or more existing ATM connections that Dziong senses. Assessing traffic loading is different from assessing interference conditions.

Applicants' disclosure and claims concern determining, from a Kalman-predicted interference vector used in defining the Resource Metric Region in a wireless communication network, whether the quality of service level is sufficient to admit a newly proposed call. These aspects are not met by the cited combination of prior art references.

The Dziong disclosure is considered in the official action to involve a "method related to radio resource usage." However, Dziong does not teach or suggest the subject matter claimed, and a general relation, as mentioned in the official action, would not indicate that distinctly different communication techniques are rendered obvious. The Dziong disclosure does not teach or lead routinely to applying a Kalman filter prediction to interference levels in a wireless network, so as to use the interference predicted if another user is admitted, in deciding whether to admit a new call.

There is no proper basis to assert that it would be predictably successful and routinely obvious to extract Kalman filtering from Dziong and in the context of a wireless communication network to apply it to interference vectors, which is not done in Naghian or Olofsson or Dziong. Thus, the prior art if combined does not produce Applicants' invention defined in amended claims 2 and 10 as a whole.

Dziong teaches an Asynchronous Transfer Mode ("ATM") network, described at col. 1, lines 26-43. An ATM network is a cell relay, packet switching network and data link layer protocol that encodes data traffic into small cells of a fixed byte size. Specifically, the cell is 53 bytes of which 48 bytes are data and 5 bytes are header information. ATM provides data link layer services that run over Layer 1 links. ATM is unlike technologies based on packet-switched networks (such as the Internet Protocol or Ethernet), in which variable sized packets (known as frames when referencing layer 2) are used.

ATM is a connection-oriented technology (noted in Dziong at col. 1, lines 30-32). A logical connection is established between the two endpoints and then data exchange begins. A connection has to be established for two parties to be able to send cells to each other. Dziong determines the level of traffic in connected calls.

In ATM, the connection is a VC ("Virtual Connection"). It can be a PVC ("Permanent Virtual Connection"), which is created administratively, or an SVC ("Switched Virtual Connection"), which is created as needed by the communicating parties. SVC creation is done by "signaling" in which the requesting party indicates the address of the receiving party, the type of service requested, and traffic parameters if applicable to the selected service. "Call admission" is then done by the network to confirm that the requested resources are available, and that a route exists for the connection.

Dziong discloses Kalman filtering to estimate the mean and variance of the cell rate process (see column 2, lines 48-55). There is no disclosure of the use of Kalman prediction of the mean and variance of an interference vector concerning plural users, as claimed by Applicants. Assessing data transmission occurring on a virtual

connection, and assessing the interference vector for plural users sharing a resource, are not the same idea. The proposed combination of Naghian, Olofsson and Dziong would not result in Applicants' invention claimed as a whole.

According to Applicants' technique, after accumulating the history needed to define a resource region, Applicants establish an interference vector to predict future performance. The standard deviation and variance of this vector are found by Kalman prediction, and are useful in refining the estimate of the call capacity of the region, for multiple wireless users. This is explained on pages 10 and 11 of the present application.

It may be possible in Dziong to find a mention of Kalman processes applicable to a cell rate process over a given signal path, but there is no reason to believe and no articulated grounds of record to explain how a person of ordinary skill would predictably expect a successful outcome from exploiting the technique of predicting an interference vector to assess service availability for plural users, as opposed to integrating the loading measured on one or more Virtual Connections and comparing the total to a perceived capacity.

In fact, using the mean and variance of an interference vector in a call admission technique is not disclosed or suggested in any of the cited references. There is no basis to conclude that a predictably successful result would be assumed and expected by the person of ordinary skill by using the mean and variance or standard deviation of interference of the received signal to interference ratio (SIR) for all users so as to determine if there will be space for another call.

According to Applicants, after accumulating a history for the resource region, the Applicants establish the interference vector to predict future performance. The standard deviation and variance of this interference are found by Kalman prediction and are useful in refining the estimate of the available number of users. Finding the mean and variance of the interference vector is not disclosed in the cited references and is not shown to have been obvious.

There is no explanation of record and no reason to believe based on the contents of the prior art of record, and the level of ordinary skill that is evident from the prior art, as to how or why a person of ordinary skill might adapt the Dziong, Naghian and Olofsson references with a reasonable expectation that some successful result. There is no support for a rejection under 35 U.S.C. §103 of claims 1 and 10 as amended.

Applicants have pointed out matters to which objection was made in the official action that were already corrected. The claims have been amended to particularly and distinctly define the subject matter of the invention, and the amended claims distinguish over the prior art of record. The differences between the invention and the prior art are such that the subject matter claimed as a whole is not shown to have been known or obvious. Claims 1 and 10 are properly allowable over the prior art, together with dependent claims 3-9 and 12. Reconsideration and allowance are requested.

Date: January 16, 2008

Attorney Docket: D4742-00069

Respectfully submitted,

/Stephan Gribok/  
Stephan P. Gribok, Reg. No. 29,643  
DUANE MORRIS LLP  
30 South 17<sup>th</sup> Street  
Philadelphia, PA 19103-4196  
Telephone: 215-979-1283  
Facsimile: 215-979-1020  
spgribok@duanemorris.com